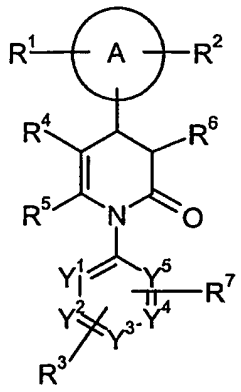
We claim

1. Compounds of the general formula (I)



(I),

wherein

A represents an aryl or heteroaryl ring,

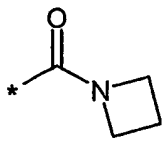
R^1, R^2 and R^3 independently from each other represent hydrogen, halogen, nitro, cyano, trifluoromethyl, C_1-C_6-alkyl, hydroxy, C_1-C_6-alkoxy or trifluoromethoxy, wherein C_1-C_6-alkyl and C_1-C_6-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of hydroxy and C_1-C_4-alkoxy,

R^4 represents C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_2-C_6-alkenoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- or di-C_1-C_6-alkylaminocarbonyl, C_3-C_6-cycloalkylaminocarbonyl, *N*-(heterocyclyl)-aminocarbonyl or cyano, wherein C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, mono- and di-C_1-C_6-alkylaminocarbonyl can be substituted with one to three identical or different radicals selected from the group consisting of hydroxy, C_1-C_4-alkoxy, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl, amino, mono- and di-C_1-C_4-alkylamino, aminocarbonyl, mono- and di-C_1-C_4-alkylaminocarbonyl, C_1-C_4-alkylcarbonylamino, phenyl, heteroaryl and heterocyclyl, and wherein phenyl can be further substituted with halogen and wherein *N*-(heterocyclyl)-aminocarbonyl can be further substituted with C_1-C_4-alkyl or benzyl,

R^5 represents C_1-C_4-alkyl,

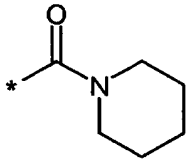
R^6 represents

– a group of the formula



which can be substituted by up to two radicals independently selected from the group consisting of C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl and phenoxy which for its part can be further substituted by halogen or trifluoromethyl,

– a group of the formula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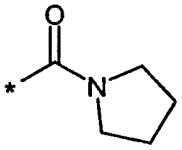
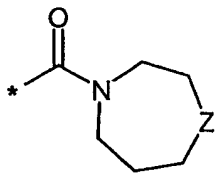


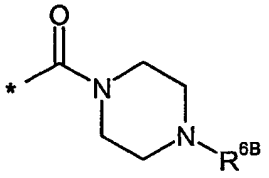
which are substituted by one or two radicals independently selected from the group consisting of C_1-C_6-alkyl, hydroxy, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkoxycarbonylamino, oxo, *N*-C_1-C_6-alkylimino, *N*-C_1-C_6-alkoxyimino, benzyl and 5- to 6-membered heterocyclyl which for its part can be further substituted by C_1-C_4-alkyl,

– a group of the formula



wherein Z represents CH_2 or N-R^{6A}, wherein R^{6A} represents hydrogen, C_1-C_6-alkyl, C_1-C_6-alkylcarbonyl or C_1-C_6-alkoxycarbonyl,

– a group of the formula



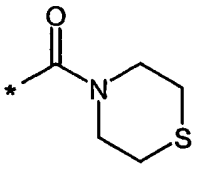
wherein R^{6B} is selected from the group consisting of

- phenyl or 5- to 6-membered heteroaryl each of which can be further substituted by up to three radicals independently selected from the group consisting of halogen, trifluoromethyl, nitro, cyano, C_1-C_6-alkyl, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl and C_1-C_6-alkylcarbonyl,
- C_3-C_8-cycloalkyl
- C_1-C_6-alkyl which is substituted by hydroxy, C_1-C_6-alkoxy, di-C_1-C_6-alkylamino, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, 5- to 6-membered heterocyclyl or by 5- to 6-membered heteroaryl or phenyl which for their part can be further substituted by up to three radicals independently selected from the group consisting of C_1-C_4-alkyl, halogen and hydroxycarbonyl,
- 5- to 6-membered heteroarylcarbonyl

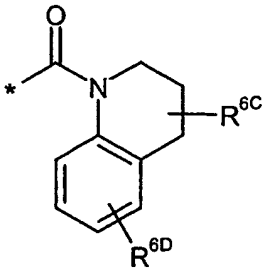
and

- C_1-C_6-alkoxycarbonyl,

– a group of the formula

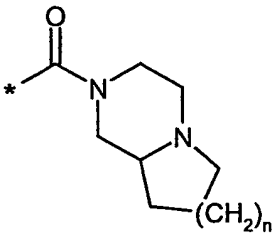


– a group of the formula



wherein R^{6C} represents hydrogen or C_1-C_4-alkyl, and R^{6D} represents hydrogen or halogen,

– a group of the formula



wherein n represents an integer of 1 or 2,

– mono- or di-C_1-C_6-alkylaminocarbonyl wherein the alkyl moiety or at least one alkyl moiety, respectively, is substituted by

- phenyl or 5- to 6-membered heteroaryl each of which are further substituted by one, two or three radicals independently selected from the group consisting of halogen, nitro, cyano, trifluoromethyl, C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, trifluoromethoxy, di-C_1-C_4-alkylamino, hydroxycarbonyl and C_1-C_4-alkoxycarbonyl,

- C_1-C_6-alkoxy which is further substituted by hydroxy, C_1-C_4-alkoxy, di-C_1-C_4-alkylamino, C_1-C_4-alkoxycarbonyl or hydroxycarbonyl,

- phenoxy

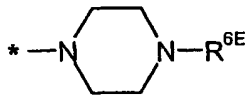
- *N*-C_1-C_4-alkyl-*N*-phenylamino

- C_3-C_8-cycloalkyl

- cyano

or by

- a group of the formula



wherein R^{6E} represents C_1-C_6-alkyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl or phenyl which for its part can be further substituted by halogen, C_1-C_4-alkyl or C_1-C_4-alkoxy,

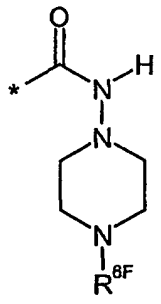
– *N*-C_1-C_6-alkyl-*N*-C_3-C_8-cycloalkylaminocarbonyl wherein the alkyl moiety can be further substituted by phenyl, 5- to 6-membered heteroaryl, hydroxycarbonyl or C_1-C_6-alkoxycarbonyl,

– arylaminocarbonyl wherein the aryl moiety is further substituted by one, two or three radicals independently selected from the group consisting of trifluoromethyl and C_1-C_4-alkyl,

– *N*-C_1-C_6-alkyl-*N*-arylaminocarbonyl wherein the aryl moiety is substituted by one, two or three radicals independently selected from the group consisting of C_1-C_4-alkyl and halogen, and/or wherein the alkyl moiety is substituted by phenyl,

or

– a group of the formula



wherein R^{6F} represents hydrogen, C_1-C_6-alkyl, C_1-C_6-alkylcarbonyl or C_1-C_6-alkoxycarbonyl,

R^7 represents hydrogen, halogen, nitro, cyano, trifluoromethyl, C_1-C_6-alkyl, hydroxy, C_1-C_6-alkoxy or trifluoromethoxy, wherein C_1-C_6-alkyl and C_1-C_6-alkoxy can be

further substituted with one to three identical or different radicals selected from the group consisting of hydroxy and C_1-C_4-alkoxy,

and

Y^1, Y^2, Y^3, Y^4 and Y^5 independently from each other represent CH or N, wherein the ring contains either 0, 1 or 2 nitrogen atoms,

and their salts, hydrates and/or solvates, and their tautomeric forms.

2. Compounds of general formula (I) according to Claim 1, wherein

A represents an aryl or heteroaryl ring,

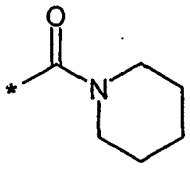
R^1, R^2 and R^3 independently from each other represent hydrogen, halogen, nitro, cyano, trifluoromethyl, C_1-C_6-alkyl, hydroxy, C_1-C_6-alkoxy or trifluoromethoxy, wherein C_1-C_6-alkyl and C_1-C_6-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of hydroxy and C_1-C_4-alkoxy,

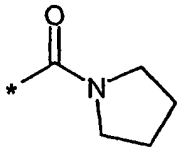
R^4 represents C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- or di-C_1-C_4-alkylaminocarbonyl or cyano, wherein C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, mono- and di-C_1-C_4-alkylaminocarbonyl can be substituted with one to three identical or different radicals selected from the group consisting of hydroxy, C_1-C_4-alkoxy, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl, amino, mono- and di-C_1-C_4-alkylamino, aminocarbonyl, mono- and di-C_1-C_4-alkylaminocarbonyl, C_1-C_4-alkylcarbonylamino and heteroaryl,

R^5 represents C_1-C_4-alkyl,

R^6 represents

- a group of the formula

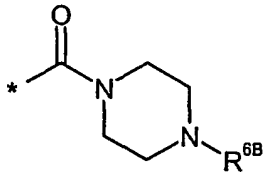


or


which are substituted by one or two radicals independently selected from the group consisting of C_1-C_6-alkyl, hydroxy, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxy-

carbonyl, C_1-C_6-alkoxycarbonylamino, oxo, pyrrolidino, piperidino and morpholino,

– a group of the formula



wherein R^{6B} is selected from the group consisting of

- phenyl or pyridyl each of which can be further substituted by up to three radicals independently selected from the group consisting of halogen, trifluoromethyl, nitro, cyano, C_1-C_6-alkyl, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl and C_1-C_6-alkylcarbonyl,
- C_1-C_6-alkyl which is substituted by hydroxy, C_1-C_6-alkoxy, di-C_1-C_6-alkylamino, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, 5- to 6-membered heterocyclyl or by 5- to 6-membered heteroaryl or phenyl which for their part can be further substituted by up to three radicals independently selected from the group consisting of C_1-C_4-alkyl, halogen and hydroxycarbonyl,

and

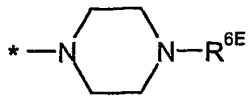
- C_1-C_6-alkoxycarbonyl,

– mono- or di-C_1-C_6-alkylaminocarbonyl wherein the alkyl moiety or at least one alkyl moiety, respectively, is substituted by

- phenyl or 5- to 6-membered heteroaryl each of which are further substituted by one, two or three radicals independently selected from the group consisting of halogen, nitro, cyano, trifluoromethyl, C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, trifluoromethoxy, di-C_1-C_4-alkylamino, hydroxycarbonyl and C_1-C_4-alkoxycarbonyl,
- C_1-C_6-alkoxy which is further substituted by hydroxy, C_1-C_4-alkoxy, di-C_1-C_4-alkylamino, C_1-C_4-alkoxycarbonyl or hydroxycarbonyl,

or by

- a group of the formula



wherein R^{6E} represents C_1-C_6-alkyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl or phenyl which for its part can be further substituted by halogen, C_1-C_4-alkyl or C_1-C_4-alkoxy,

or

- *N*-C_1-C_6-alkyl-*N*-C_3-C_8-cycloalkylaminocarbonyl wherein the alkyl moiety can be further substituted by phenyl, 5- to 6-membered heteroaryl, hydroxycarbonyl or C_1-C_6-alkoxycarbonyl,

R^7 represents hydrogen, halogen, nitro, cyano, trifluoromethyl, C_1-C_6-alkyl, hydroxy, C_1-C_6-alkoxy or trifluoromethoxy, wherein C_1-C_6-alkyl and C_1-C_6-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of hydroxy and C_1-C_4-alkoxy,

and

Y^1, Y^2, Y^3, Y^4 and Y^5 independently from each other represent CH or N, wherein the ring contains either 0, 1 or 2 nitrogen atoms.

3. Compounds of general formula (I) according to Claim 1 or 2, wherein

A represents a phenyl or pyridyl ring,

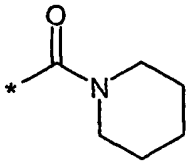
R^1, R^2 and R^3 independently from each other represent hydrogen, fluoro, chloro, bromo, nitro, cyano, methyl, ethyl, trifluoromethyl or trifluoromethoxy,

R^4 represents C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl or cyano, wherein C_1-C_6-alkylcarbonyl and C_1-C_6-alkoxycarbonyl can be substituted with one to two identical or different radicals selected from the group consisting of hydroxy, methoxy, hydroxycarbonyl, methoxycarbonyl, amino, mono- and di-C_1-C_4-alkylamino,

R^5 represents methyl,

R^6 represents

- a group of the formula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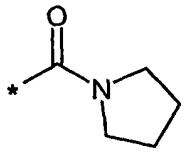
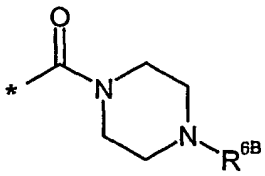


which are substituted by one or two radicals independently selected from the group consisting of C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl, C_1-C_4-alkoxycarbonylamino, oxo, pyrrolidino, piperidino and morpholino,

- a group of the formula



wherein R^{6B} is selected from the group consisting of

- phenyl or pyridyl each of which can be further substituted by up to three radicals independently selected from the group consisting of fluoro, chloro, trifluoromethyl, nitro, cyano, C_1-C_4-alkyl, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl and C_1-C_4-alkylcarbonyl,
- C_1-C_4-alkyl which is substituted by hydroxy, C_1-C_4-alkoxy, di-C_1-C_4-alkylamino, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl, tetrahydrofuryl, morpholinyl, thienyl or by phenyl which for its part can be further substituted by up to three radicals independently selected from the group consisting of C_1-C_4-alkyl, fluoro, chloro and hydroxycarbonyl,

and

- C_1-C_4-alkoxycarbonyl,

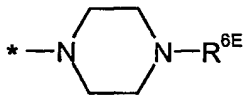
- mono- or di-C_1-C_4-alkylaminocarbonyl wherein the alkyl moiety or at least one alkyl moiety, respectively, is substituted by

- phenyl, pyridyl or pyrimidinyl each of which are further substituted by one, two or three radicals independently selected from the group consisting of fluoro, chloro, nitro, cyano, trifluoromethyl, C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, trifluoromethoxy, di-C_1-C_4-alkylamino, hydroxycarbonyl and C_1-C_4-alkoxycarbonyl,

- C_1-C_4-alkoxy which is further substituted by hydroxy, C_1-C_4-alkoxy, di-C_1-C_4-alkylamino, C_1-C_4-alkoxycarbonyl or hydroxycarbonyl,

  or by

- a group of the formula



  wherein R^{6E} represents C_1-C_4-alkyl, C_1-C_4-alkylcarbonyl, C_1-C_4-alkoxy-carbonyl or phenyl which for its part can be further substituted by fluoro, chloro, C_1-C_4-alkyl or C_1-C_4-alkoxy,

or

- *N*-C_1-C_4-alkyl-*N*-C_3-C_6-cycloalkylaminocarbonyl wherein the alkyl moiety can be further substituted by phenyl, furyl, pyridyl, hydroxycarbonyl or C_1-C_4-alkoxy-carbonyl,

R^7 represents hydrogen, halogen, nitro, cyano, trifluoromethyl, trifluoromethoxy, methyl or ethyl,

and

Y^1, Y^2, Y^3, Y^4 and Y^5 each represent CH.

4. Compounds of general formula (I) according to Claim 1, 2 or 3, wherein

A represents a phenyl ring,

R^1 represents hydrogen,

R^2 represents cyano, bromo or nitro,

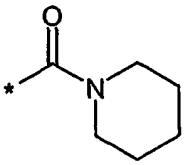
R^3 represents hydrogen,

R^4 represents C_1-C_4-alkylcarbonyl, C_1-C_4-alkoxycarbonyl or cyano, wherein C_1-C_4-alkylcarbonyl and C_1-C_4-alkoxycarbonyl can be substituted with hydroxycarbonyl or C_1-C_4-alkoxycarbonyl,

R^5 represents methyl,

R^6 represents

– a group of the formula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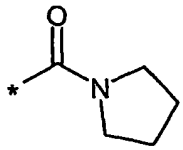
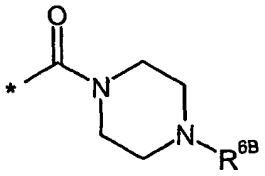


which are substituted by one or two radicals independently selected from the group consisting of C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl, C_1-C_4-alkoxycarbonylamino, oxo, pyrrolidino, piperidino and morpholino,

– a group of the formula



wherein R^{6B} is selected from the group consisting of

- phenyl or pyridyl each of which can be further substituted by up to three radicals independently selected from the group consisting of fluoro, chloro, trifluoromethyl, nitro, cyano, C_1-C_4-alkyl, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl and C_1-C_4-alkylcarbonyl,

- C_1-C_4-alkyl which is substituted by hydroxy, C_1-C_4-alkoxy, di-C_1-C_4-alkylamino, hydroxycarbonyl, C_1-C_4-alkoxycarbonyl, tetrahydrofuryl, morpholinyl, thienyl or by phenyl which for its part can be further substituted by up

to three radicals independently selected from the group consisting of C_1-C_4-alkyl, fluoro, chloro and hydroxycarbonyl,

and

- C_1-C_4-alkoxycarbonyl,

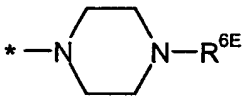
– mono- or di-C_1-C_4-alkylaminocarbonyl wherein the alkyl moiety or at least one alkyl moiety, respectively, is substituted by

- phenyl, pyridyl or pyrimidinyl each of which are further substituted by one, two or three radicals independently selected from the group consisting of fluoro, chloro, nitro, cyano, trifluoromethyl, C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, trifluoromethoxy, di-C_1-C_4-alkylamino, hydroxycarbonyl and C_1-C_4-alkoxycarbonyl,

- C_1-C_4-alkoxy which is further substituted by hydroxy, C_1-C_4-alkoxy, di-C_1-C_4-alkylamino, C_1-C_4-alkoxycarbonyl or hydroxycarbonyl,

or by

- a group of the formula



wherein R^{6E} represents C_1-C_4-alkyl, C_1-C_4-alkylcarbonyl, C_1-C_4-alkoxycarbonyl or phenyl which for its part can be further substituted by fluoro, chloro, C_1-C_4-alkyl or C_1-C_4-alkoxy,

or

– *N*-C_1-C_4-alkyl-*N*-C_3-C_6-cycloalkylaminocarbonyl wherein the alkyl moiety can be further substituted by phenyl, furyl, pyridyl, hydroxycarbonyl or C_1-C_4-alkoxycarbonyl,

R^7 represents trifluoromethyl or nitro,

and

Y^1, Y^2, Y^3, Y^4 and Y^5 each represent CH.

5. Compounds of general formula (I) according to at least one of Claims 1 to 4, wherein A is phenyl.

6. Compounds of general formula (I) according to at least one of Claims 1 to 5, wherein R^1 is hydrogen.

7. Compounds of general formula (I) according to at least one of Claims 1 to 6, wherein R^2 is cyano.

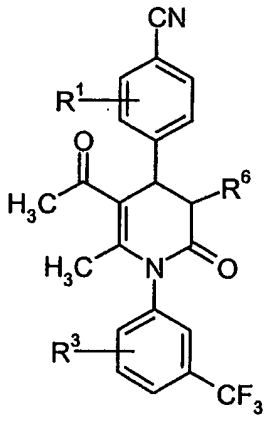
8. Compounds of general formula (I) according to at least one of Claims 1 to 7, wherein R^3 is hydrogen.

9. Compounds of general formula (I) according to at least one of Claims 1 to 8, wherein R^4 is acetyl, methoxycarbonyl, ethoxycarbonyl or cyano.

10. Compounds of general formula (I) according to at least one of Claims 1 to 9, wherein R^5 is methyl.

11. Compounds of general formula (I) according to at least one of Claims 1 to 10, wherein R^7 is trifluoromethyl or nitro.

12. Compounds of general formula (IA)

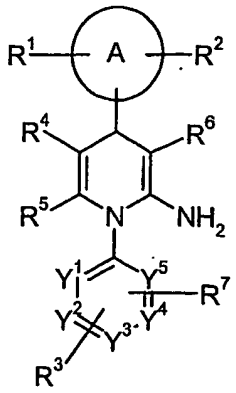


(IA),

wherein R^1, R^3 and R^6 have the meaning indicated in Claims 1 to 11.

13. Processes for synthesizing the compounds of general formula (I) or (IA), respectively, as defined in Claims 1 to 12, characterized in that

[A] compounds of general formula (II)



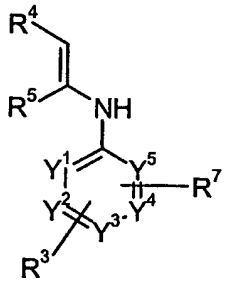
(II),

wherein R^1 to R^7, A and Y^1 to Y^5 have the meaning indicated in Claims 1 to 12,

are hydrolyzed with water,

or

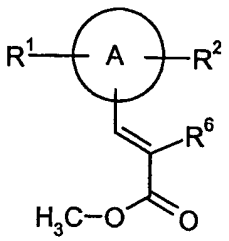
[B] compounds of general formula (III)



(III),

wherein R^3, R^4, R^5, R^7, and Y^1 to Y^5 have the meaning indicated in Claims 1 to 12,

are reacted with compounds of general formula (IV)

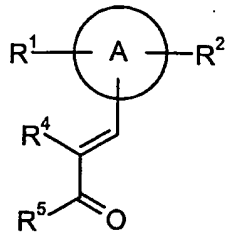


(IV),

wherein R^1, R^2, R^6 and A have the meaning indicated in Claims 1 to 12,

or

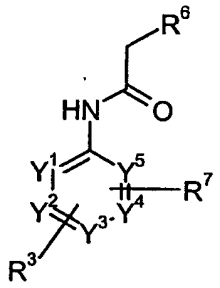
[C] compounds of general formula (V)



(V),

wherein R^1, R^2, R^4, R^5 and A have the meaning indicated in Claims 1 to 12,

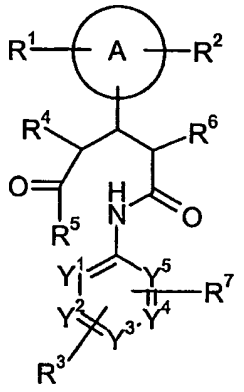
are reacted with compounds of general formula (VI)



(VI),

wherein R^3, R^6, R^7, and Y^1 to Y^5 have the meaning indicated in Claims 1 to 12,

in the presence of *N*-tetrabutylammoniumfluoride to give compounds of general formula (VII)



(VII),

wherein R^1 to R^5, R^6, R^7, A, and Y^1 to Y^5 have the meaning indicated in Claims 1 to 12,

which are then cyclized to compounds of general formula (I) in the presence of an acidic ion exchange resin, such as Amberlyst®-15, and a dehydrating agent, such as magnesium sulfate.

14. The composition containing at least one compound of general formula (I) or (IA), as defined in Claims 1 to 12, and a pharmacologically acceptable diluent.

15. A composition according to Claim 14 for the treatment of acute and chronic inflammatory, ischaemic and/or remodelling processes.

16. The process for the preparation of compositions according to Claim 14 and 15 characterized in that the compounds of general formula (I) or (IA), as defined in Claims 1 to 12, together with customary auxiliaries are brought into a suitable application form.

17. Use of the compounds of general formula (I) or (IA), as defined in Claims 1 to 12, for the preparation of medicaments.

18. Use according to Claim 17 for the preparation of medicaments for the treatment of acute and chronic inflammatory, ischaemic and/or remodelling processes.

19. Use according to Claim 18, wherein the process is chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure.

20. Process for controlling chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure in humans and animals by administration of an neutrophil elastase inhibitory amount of at least one compound according to any of Claims 1 to 12.